



Lea County, NM (NAD 83 NME)

Ares 4 State #202H

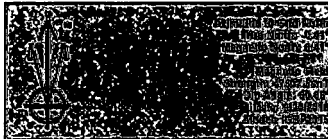
Plan #1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #202H

Ground Level: 3581.0
KB = 25 @ 3606.0usft
Northing 452481.00 Easting 776008.00 Latitude 32° 14' 29.801 N Longitude 103° 34' 27.534 W



To convert a Magnetic Direction to a Grid Direction, Add 6.41°
To convert a Magnetic Direction to a True Direction, Add 6.82° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

SECTION DETAILS

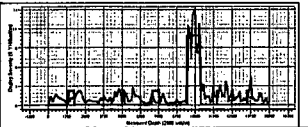
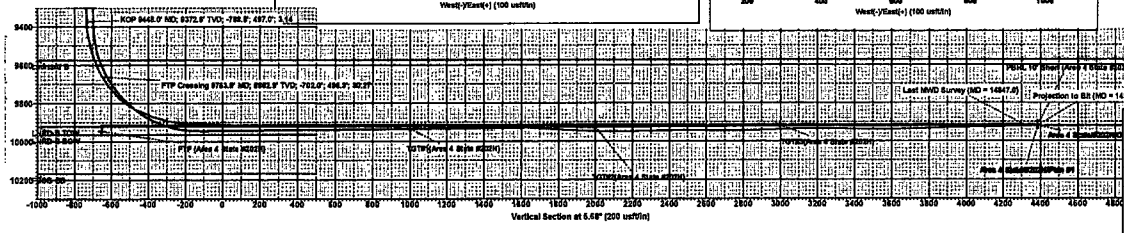
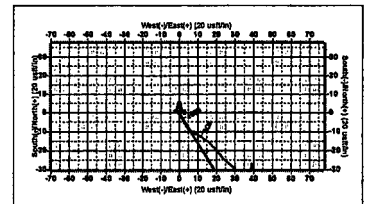
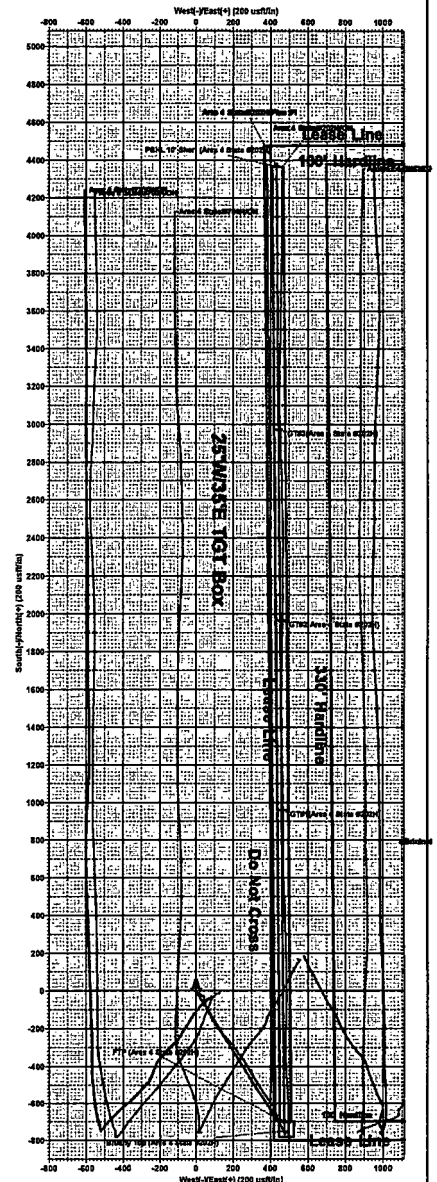
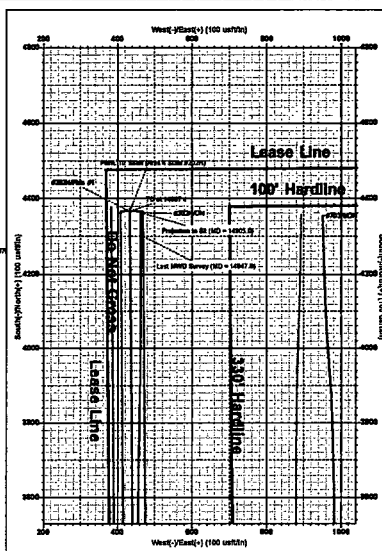
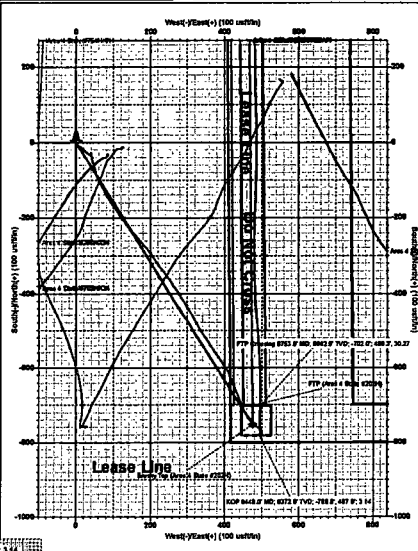
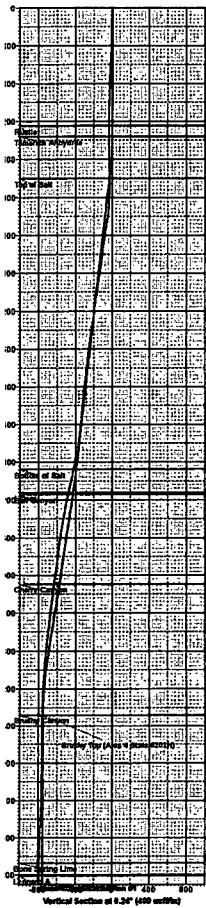
Sec	MD	Inc	Asl	TVD	+N-S	+E-W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	1350.0	0.00	0.00	1350.0	0.0	0.0	0.00	0.00	0.0		
3	1750.0	8.00	147.87	1748.7	-33.6	14.9	2.00	147.67	-22.9		
4	5033.3	8.00	147.87	5000.0	-406.7	283.3	0.00	0.00	-382.0		
5	5153.3	10.40	147.68	5118.5	-426.9	283.3	2.00	-0.03	-397.1		
6	7030.4	10.40	147.68	6984.8	-712.2	480.8	0.00	0.00	-684.1		
7	7650.5	0.00	0.00	7482.0	-762.0	476.0	2.00	180.00	-701.2		Brushy Top (Area 4 State #202H)
8	9443.0	0.00	0.00	9274.5	-752.0	476.0	0.00	0.00	-701.2		
9	10348.3	90.63	359.53	9947.4	-172.8	471.2	10.00	359.53	-125.3		
10	11481.2	90.63	359.53	9936.0	869.0	462.0	0.00	0.00	1000.0		TGT#1(Area 4 State #202H)
11	11487.0	90.61	359.53	9934.9	864.8	461.9	2.00	180.00	1005.8		
12	12487.0	90.61	359.53	9928.0	1964.8	463.7	0.00	0.00	2000.0		TGT#2(Area 4 State #202H)
13	12492.7	90.40	359.53	9926.0	1970.5	463.7	2.00	-180.00	2005.7		TGT#3(Area 4 State #202H)
14	13492.8	90.40	359.53	9919.0	2970.5	445.4	0.00	0.00	3000.0		
15	13505.7	90.08	359.53	9919.9	2996.4	445.3	2.00	-180.00	3016.8		
16	14887.4	90.08	359.53	9917.0	4385.0	434.0	0.00	0.00	4386.5		PBHL 10' Short (Area 4 State #202H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top (Area 4 State #202H)	7482.0	-762.0	476.0	451709.00	776484.00
TGT#1(Area 4 State #202H)	9936.0	869.0	462.0	453420.00	776489.98
TGT#2(Area 4 State #202H)	9926.0	1964.8	463.7	454426.00	776481.70
TGT#3(Area 4 State #202H)	9919.0	2970.5	445.4	455431.50	776453.45
PBHL 10' Short (Area 4 State #202H)	9917.0	4385.0	434.0	456226.00	776442.00
FTP (Area 4 State #202H)	9946.0	-702.0	476.0	451709.00	776484.00



Lea County, NM (NAD 83 NME)
Ares 4 State #202H
Plan #1
5/16/2008



HOBBS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ares 4 State

#202H

OH

Design: OH

Midland PVA

16 November, 2018



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3606.0usft
Site:	Area 4 State	MD Reference:	KB = 25 @ 3606.0usft
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Area 4 State		
Site Position:		Northing:	451,993.00 usft
From:	Map	Easting:	777,413.00 usft
Position Uncertainty:	0.0 usft	Grid Radius:	13-3/16 "
		Latitude:	32° 14' 28.072 N
		Longitude:	103° 34' 11.215 W
		Grid Convergence:	0.41 °

Well	#202H		
Well Position	+N-S	0.0 usft	Northing: 452,461.00 usft
	+E-W	0.0 usft	Easting: 776,008.00 usft
Position Uncertainty	0.0 usft		Wellhead Elevation: usft
			Latitude: 32° 14' 29.801 N
			Longitude: 103° 34' 27.534 W
			Ground Level: 3,581.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	9/20/2018	6.82
			Dip Angle (°)
			60.06
			Field Strength (nT)
			47,817.52480028

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			5.68

Survey Program	Date 11/16/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
136.0	14,905.0	Newsco MWD (OH)	MWD
			Description
			OWSG MWD - Standard



Midland PVA

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Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
136.0	1.50	157.90	136.0	-1.6	0.7	1.10	1.10	0.00	-1.8	0.0	
312.0	2.20	151.00	311.9	-6.7	3.2	0.42	0.40	-3.92	-7.4	-0.5	
492.0	4.20	116.70	491.6	-12.7	10.7	1.49	1.11	-19.06	-15.3	-6.6	
673.0	3.70	142.10	672.2	-20.3	20.2	1.00	-0.28	14.03	-28.5	3.5	
855.0	2.50	127.80	853.9	-27.4	27.0	0.78	-0.66	-7.86	-38.1	-5.1	
1,036.0	1.30	126.10	1,034.8	-31.0	31.8	0.66	-0.66	-0.94	-43.9	-6.3	
1,216.0	0.80	123.60	1,214.8	-32.9	34.5	0.28	-0.28	-1.39	-46.9	-8.3	
1,301.0	0.80	120.40	1,299.8	-33.5	35.5	0.05	0.00	-3.76	-47.6	-11.0	
1,402.0	0.70	78.60	1,400.8	-33.8	36.7	0.54	-0.10	-41.39	-29.1	-39.9	
1,587.0	1.80	12.30	1,585.7	-30.7	38.4	0.89	0.59	-35.84	14.7	-37.2	
1,776.0	0.40	348.90	1,774.7	-27.2	38.9	0.76	-0.74	-12.38	4.5	-21.5	
1,965.0	2.90	174.10	1,963.6	-31.3	39.3	1.75	1.32	-92.49	16.8	10.1	
2,060.0	4.60	167.40	2,058.4	-37.4	40.4	1.84	1.79	-7.05	21.7	7.3	
2,154.0	6.40	165.60	2,152.0	-46.1	42.5	1.92	1.91	-1.91	25.0	3.8	
2,249.0	8.00	164.80	2,246.2	-57.6	45.5	1.69	1.68	-0.84	25.7	0.2	
2,343.0	8.80	162.70	2,339.2	-70.8	49.4	0.91	0.85	-2.23	24.6	-2.5	
2,438.0	8.80	160.00	2,433.1	-84.6	54.0	0.43	0.00	-2.84	23.0	-4.5	
2,532.0	8.80	158.20	2,526.0	-98.0	59.2	0.29	0.00	-1.91	21.6	-6.4	
2,627.0	8.80	155.50	2,619.9	-111.4	64.9	0.43	0.00	-2.84	20.5	-7.6	
2,722.0	9.10	152.00	2,713.7	-124.6	71.4	0.65	0.32	-3.68	19.3	-7.8	
2,816.0	9.10	148.90	2,806.5	-137.5	78.7	0.52	0.00	-3.30	17.9	-7.4	
2,911.0	9.60	147.90	2,900.3	-150.7	86.8	0.55	0.53	-1.05	15.8	-7.3	
3,006.0	9.90	146.40	2,993.9	-164.2	95.6	0.41	0.32	-1.58	13.0	-6.8	
3,100.0	10.20	144.70	3,086.5	-177.7	104.8	0.45	0.32	-1.81	9.9	-6.0	
3,195.0	10.60	144.70	3,179.9	-191.7	114.8	0.42	0.42	0.00	5.9	-5.3	
3,289.0	10.70	142.90	3,272.3	-205.7	125.0	0.37	0.11	-1.91	1.6	-4.3	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3606.0usft
Site:	Area 4 State	MD Reference:	KB = 25 @ 3606.0usft
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
3,383.0	10.80	142.30	3,364.6	-219.7	135.7	0.16	0.11	-0.84	-2.9	-3.1
3,478.0	11.20	140.10	3,457.9	-233.8	147.0	0.61	0.42	-2.32	-7.8	-1.8
3,572.0	10.40	139.80	3,550.2	-247.3	158.4	0.85	-0.85	-0.32	-12.5	-0.1
3,667.0	9.90	138.70	3,643.7	-260.0	169.3	0.56	-0.53	-1.16	-16.3	1.5
3,762.0	8.80	136.90	3,737.5	-271.4	179.6	1.20	-1.16	-1.89	-18.8	3.2
3,856.0	8.10	139.30	3,830.5	-281.7	188.9	0.83	-0.74	2.55	-19.5	6.2
3,951.0	8.20	142.70	3,924.5	-292.1	197.3	0.52	0.11	3.58	-19.4	8.9
4,045.0	8.40	144.80	4,017.5	-303.1	205.4	0.39	0.21	2.23	-19.5	10.5
4,140.0	7.60	144.20	4,111.6	-313.8	213.0	0.85	-0.84	-0.63	-19.7	11.0
4,234.0	6.80	142.20	4,204.8	-323.3	220.1	0.89	-0.85	-2.13	-18.8	11.4
4,329.0	6.60	140.70	4,299.2	-332.0	227.0	0.28	-0.21	-1.58	-17.0	12.3
4,423.0	7.30	141.80	4,392.5	-340.8	234.1	0.76	0.74	1.17	-15.1	14.1
4,517.0	9.00	140.60	4,485.6	-351.2	242.5	1.82	1.81	-1.28	-15.7	15.3
4,612.0	9.80	144.60	4,579.3	-363.5	251.9	1.09	0.84	4.21	-17.0	17.5
4,706.0	11.40	147.00	4,671.7	-377.8	261.6	1.77	1.70	2.55	-20.5	18.7
4,800.0	13.50	146.80	4,763.5	-394.8	272.6	2.23	2.23	-0.21	-27.8	18.9
4,895.0	15.10	147.40	4,855.5	-414.5	285.4	1.69	1.68	0.63	-38.0	19.4
4,989.0	15.20	148.80	4,946.2	-435.4	298.3	0.40	0.11	1.49	-49.2	20.4
5,020.0	15.50	150.30	4,976.1	-442.5	302.5	1.61	0.97	4.84	-52.7	21.6
5,081.0	15.80	150.90	5,034.9	-456.8	310.6	0.56	0.49	0.98	-60.3	21.7
5,175.0	14.20	150.60	5,125.7	-478.0	322.5	1.70	-1.70	-0.32	-68.9	20.4
5,269.0	12.80	149.10	5,217.1	-497.0	333.5	1.54	-1.49	-1.60	-74.5	17.8
5,458.0	13.00	146.30	5,401.3	-532.6	356.0	0.35	0.11	-1.48	-83.5	14.0
5,646.0	11.90	144.50	5,584.9	-566.0	379.0	0.62	-0.59	-0.96	-90.7	12.6
5,741.0	9.70	147.40	5,678.2	-580.7	389.0	2.38	-2.32	3.05	-90.6	17.7
5,929.0	7.60	144.80	5,864.0	-604.2	404.7	1.14	-1.12	-1.38	-85.6	14.6
6,118.0	8.40	160.20	6,051.2	-627.4	416.6	1.21	0.42	8.15	-71.2	32.4



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3606.0usft
Site:	Area 4 State	MD Reference:	KB = 25 @ 3606.0usft
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
6,306.0	7.50	157.60	6,237.4	-651.7	425.9	0.52	-0.48	-1.38	-55.0	22.7
6,495.0	7.00	157.70	6,424.9	-673.8	435.0	0.26	-0.26	0.05	-55.1	16.9
6,684.0	7.10	156.10	6,612.5	-695.1	444.1	0.12	0.05	-0.85	-44.9	10.1
6,873.0	6.70	154.70	6,800.1	-715.8	453.5	0.23	-0.21	-0.74	-33.8	4.5
7,062.0	4.10	142.70	6,988.3	-731.1	462.3	1.49	-1.38	-6.35	-17.5	-1.9
7,251.0	3.50	138.80	7,176.8	-740.8	470.2	0.34	-0.32	-2.01	-3.9	0.5
7,440.0	3.20	143.30	7,365.5	-749.4	477.2	0.21	-0.16	2.33	-1.0	2.3
7,628.0	3.50	135.50	7,553.2	-757.7	484.3	0.29	0.16	-4.15	-9.9	2.0
7,817.0	1.00	93.30	7,742.0	-761.9	490.0	1.50	-1.32	-22.33	-14.6	-9.1
8,006.0	1.00	123.00	7,931.0	-762.9	493.1	0.27	0.00	15.71	-20.2	0.1
8,195.0	0.80	130.50	8,120.0	-764.7	495.4	0.12	-0.11	3.97	-23.0	3.0
8,385.0	1.30	147.00	8,310.0	-767.3	497.6	0.30	0.26	8.68	-24.6	9.8
8,574.0	1.40	156.40	8,498.9	-771.2	499.7	0.13	0.05	4.97	-27.1	14.0
8,763.0	1.70	194.80	8,687.8	-776.1	499.9	0.56	0.16	20.32	-17.2	29.3
8,952.0	2.00	197.60	8,876.8	-781.9	498.2	0.17	0.16	1.48	-21.8	30.2
9,141.0	1.30	187.80	9,065.7	-787.2	496.9	0.40	-0.37	-5.19	-32.0	25.5
9,330.0	0.40	156.80	9,254.6	-789.9	496.9	0.52	-0.48	-16.40	-43.1	4.3
9,390.0	0.40	131.30	9,314.6	-790.3	497.1	0.29	0.00	-42.50	-41.1	-14.8
9,448.0	3.14	350.88	9,372.6	-788.8	497.0	5.96	4.72	-242.11	39.7	-14.9
KOP 9448.0' MD; 9372.6' TVD; -788.8'; 497.0'; 3.14										
9,486.0	5.40	349.10	9,410.5	-786.0	496.5	5.96	5.95	-4.67	38.3	-13.6
9,534.0	10.80	353.40	9,458.0	-779.3	495.6	11.31	11.25	8.96	35.1	-15.8
9,628.0	20.30	359.60	9,548.5	-754.2	494.5	10.25	10.11	6.60	28.1	-18.5
9,723.0	26.40	3.40	9,635.7	-716.6	495.6	6.61	6.42	4.00	23.6	-21.4
9,753.9	30.27	1.94	9,662.9	-702.0	496.3	12.71	12.52	-4.73	23.6	-21.6
FTP Crossing 9753.9' MD; 9662.9' TVD; -702.0'; 496.3'; 30.27										
9,817.0	38.20	359.80	9,715.0	-666.5	496.7	12.71	12.57	-3.39	21.7	-21.5



Midland PVA

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Site:	Ares 4 State	MD Reference:	KB = 25 @ 3606.0usft
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
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9,911.0	50.90	358.30	9,781.8	-600.7	495.6	13.56	13.51	-1.60	13.7	-20.6	
10,006.0	63.00	355.20	9,833.6	-521.4	490.9	13.02	12.74	-3.26	0.4	-16.8	
10,100.0	70.10	356.10	9,870.9	-435.5	484.4	7.60	7.55	0.96	-13.9	-11.4	
10,192.0	76.50	358.50	9,897.4	-347.5	480.3	7.39	6.96	2.61	-23.6	-7.7	
10,287.0	87.20	1.30	9,910.8	-253.6	480.1	11.63	11.26	2.95	-31.5	-8.1	
10,381.0	89.70	2.20	9,913.4	-159.7	483.0	2.83	2.66	0.96	-33.9	-11.9	
10,476.0	88.00	1.40	9,915.3	-64.8	486.0	1.98	-1.79	-0.84	-31.0	-15.6	
10,570.0	87.10	358.90	9,919.3	29.1	486.2	2.82	-0.96	-2.66	-25.9	-16.7	
10,665.0	87.80	358.70	9,923.5	124.0	484.2	0.77	0.74	-0.21	-20.6	-15.4	
10,759.0	88.80	358.80	9,926.3	218.0	482.2	1.07	1.06	0.11	-16.8	-14.2	
10,853.0	89.80	358.30	9,927.5	311.9	479.8	1.19	1.06	-0.53	-14.7	-12.5	
10,948.0	90.60	357.50	9,927.1	406.9	476.3	1.19	0.84	-0.84	-13.9	-9.8	
11,041.0	90.40	357.60	9,926.3	499.8	472.4	0.24	-0.22	0.11	-13.7	-6.6	
11,136.0	90.80	357.80	9,925.3	594.7	468.5	0.47	0.42	0.21	-13.7	-3.6	
11,231.0	89.20	359.60	9,925.3	689.7	466.4	2.54	-1.68	1.89	-12.6	-2.2	
11,325.0	90.00	0.30	9,926.0	783.7	466.3	1.13	0.85	0.74	-11.0	-2.9	
11,419.0	89.00	359.70	9,926.8	877.7	466.3	1.24	-1.06	-0.64	-9.1	-3.7	
11,514.0	89.80	359.60	9,927.8	972.6	465.7	0.85	0.84	-0.11	-7.1	-3.9	
11,608.0	91.50	359.50	9,926.7	1,066.6	465.0	1.81	1.81	-0.11	-7.3	-3.9	
11,703.0	89.00	358.70	9,926.3	1,161.6	463.5	2.76	-2.63	-0.84	-6.9	-3.2	
11,797.0	90.60	358.70	9,926.6	1,255.6	461.4	1.70	1.70	0.00	-5.7	-1.8	
11,892.0	89.70	359.20	9,926.4	1,350.6	459.6	1.08	-0.95	0.53	-5.1	-0.9	
11,986.0	90.80	359.50	9,926.0	1,444.6	458.6	1.21	1.17	0.32	-4.7	-0.6	
12,081.0	87.70	359.70	9,927.2	1,539.5	457.9	3.27	-3.26	0.21	-2.6	-0.7	
12,175.0	85.60	0.30	9,932.7	1,633.4	457.9	2.32	-2.23	0.64	3.7	-1.5	
12,270.0	85.80	0.60	9,939.8	1,728.1	458.6	0.38	0.21	0.32	11.7	-3.0	
12,364.0	86.70	1.00	9,946.0	1,821.9	459.9	1.05	0.96	0.43	18.7	-5.1	



Midland PVA

Company: EOG Resources - Midland		Local Co-ordinate Reference:		Well #202H	
Project: Lea County, NM (NAD 83 NME)		TVD Reference:		KB = 25 @ 3606.0usft	
Site: Area 4 State		MD Reference:		KB = 25 @ 3606.0usft	
Well: #202H		North Reference:		Grid	
Wellbore: OH		Survey Calculation Method:		Minimum Curvature	
Design: OH		Database:		EDM 5000.14	

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
12,458.0	88.00	1.50	9,950.3	1,915.8	462.0	1.48	1.38	0.53	23.9	-7.9	
12,553.0	89.60	0.50	9,952.3	2,010.7	463.7	1.99	1.68	-1.05	26.6	-10.3	
12,647.0	90.10	0.60	9,952.6	2,104.7	464.6	0.54	0.53	0.11	27.5	-12.0	
12,742.0	90.80	0.40	9,951.8	2,199.7	465.4	0.77	0.74	-0.21	27.5	-13.6	
12,836.0	91.70	0.60	9,949.8	2,293.7	466.2	0.98	0.96	0.21	26.1	-15.2	
12,931.0	90.80	359.90	9,947.7	2,388.7	466.6	1.20	-0.95	-0.74	24.6	-16.4	
13,025.0	89.60	358.70	9,947.4	2,482.6	465.5	1.81	-1.28	-1.28	25.0	-16.0	
13,119.0	89.40	358.40	9,948.2	2,576.6	463.1	0.38	-0.21	-0.32	26.4	-14.4	
13,214.0	89.90	358.30	9,948.8	2,671.6	460.4	0.54	0.53	-0.11	27.7	-12.5	
13,308.0	90.70	358.20	9,948.3	2,765.5	457.5	0.86	0.85	-0.11	27.8	-10.4	
13,402.0	91.20	358.20	9,946.7	2,859.5	454.5	0.53	0.53	0.00	26.9	-8.2	
13,497.0	91.80	358.40	9,944.2	2,954.4	451.7	0.67	0.63	0.21	25.1	-6.1	
13,591.0	92.30	357.90	9,940.9	3,048.3	448.7	0.75	0.53	-0.53	22.0	-3.9	
13,685.0	91.50	0.20	9,937.7	3,142.2	447.1	2.59	-0.85	2.45	19.0	-3.1	
13,779.0	88.20	1.60	9,938.0	3,236.2	448.6	3.81	-3.51	1.49	19.4	-5.3	
13,874.0	88.90	1.40	9,940.4	3,331.1	451.1	0.77	0.74	-0.21	21.9	-8.6	
13,969.0	89.60	1.10	9,941.6	3,426.1	453.2	0.80	0.74	-0.32	23.3	-11.5	
14,063.0	90.10	1.00	9,941.9	3,520.1	454.9	0.54	0.53	-0.11	23.7	-13.9	
14,158.0	90.50	0.90	9,941.4	3,615.1	456.5	0.43	0.42	-0.11	23.3	-16.3	
14,252.0	91.10	0.80	9,940.1	3,709.0	457.9	0.65	0.64	-0.11	22.2	-18.5	
14,346.0	92.60	1.00	9,937.0	3,803.0	459.3	1.61	1.60	0.21	19.3	-20.7	
14,441.0	91.20	1.00	9,933.9	3,897.9	461.0	1.47	-1.47	0.00	16.2	-23.1	
14,535.0	91.00	0.50	9,932.1	3,991.9	462.2	0.57	-0.21	-0.53	14.6	-25.1	
14,629.0	91.20	0.40	9,930.3	4,085.9	463.0	0.24	0.21	-0.11	12.9	-26.7	
14,724.0	91.80	0.00	9,927.8	4,180.8	463.3	0.76	0.63	-0.42	10.5	-27.8	
14,819.0	92.60	359.90	9,924.2	4,275.8	463.2	0.85	0.84	-0.11	7.0	-28.5	



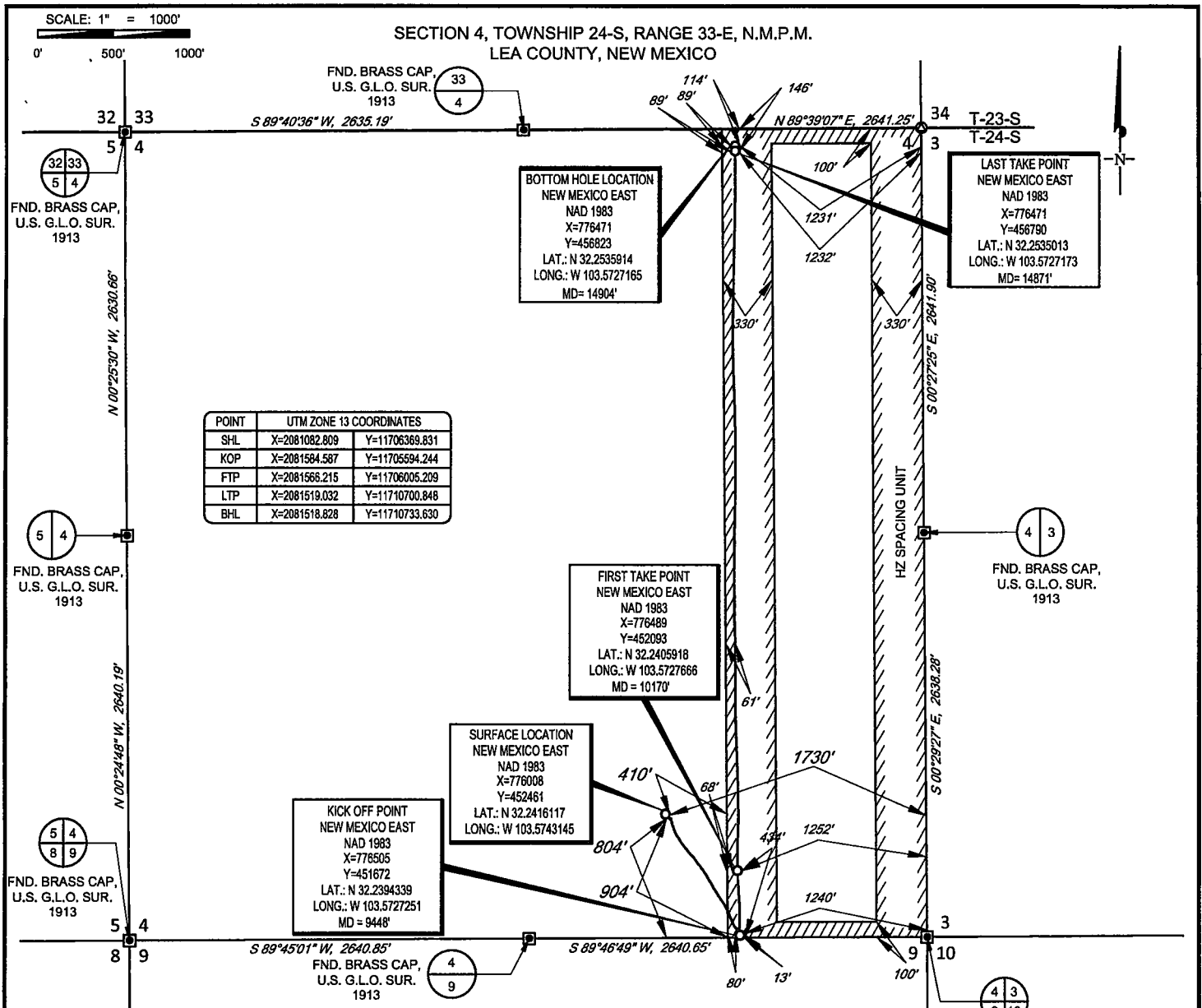
Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3606.0usft
Site:	Area 4 State	MD Reference:	KB = 25 @ 3606.0usft
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Incl (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,847.0	92.70	0.00	9,922.9	4,303.7	463.2	0.50	0.36	0.36	5.8	-28.7	
Last MWD Survey (MD = 14847.0)											
14,905.0	92.70	0.00	9,920.1	4,361.7	463.2	0.00	0.00	0.00	3.1	-29.1	
Projection to BR (MD = 14905.0)											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N-S (usft)	+E-W (usft)	Comment	
9,448.0	9,372.6	-788.8	497.0	KOP 9448.0' MD; 9372.6' TVD; -788.8'; 497.0'; 3.14	
9,753.9	9,662.9	-702.0	496.3	FTP Crossing 9753.9' MD; 9662.9' TVD; -702.0'; 496.3'; 30.27	
14,847.0	9,922.9	4,303.7	463.2	Last MWD Survey (MD = 14847.0)	
14,905.0	9,920.1	4,361.7	463.2	Projection to BR (MD = 14905.0)	

Checked By: _____	Approved By: _____	Date: _____
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LEASE NAME & WELL NO.: ARES 4 STATE #202H

SECTION 4 TWP 24-S RGE 33-E SURVEY N.M.P.M.

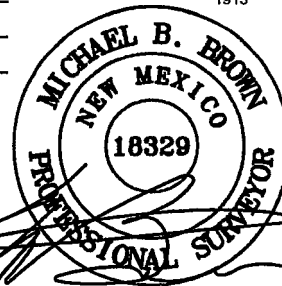
COUNTY LEA STATE NM ELEVATION 3582'

DESCRIPTION 804' FSL & 1730' FEL



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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Michael Blake Brown, P.S. No. 18329
SEPTEMBER 25, 2017



ARES 4 STATE #202H AS-COMPLETED	REVISION:	NOTES: 1. ORIGINAL DOCUMENT SIZE: 8.5" X 11" 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983. 3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
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FILE:AD_ARES_4_STATE_202H		
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SHEET: 1 OF 1		